

APPENDIX J

ARMED SERVICES SPECIFICATION  
CARE OF REMAINS OF DECEASED PERSONNEL  
REGULAR AND PORT OF ENTRY REQUIREMENTS

1. SCOPE

1.1 This specification (in four parts) establishes minimum standards for the care and handling of deceased personnel. It encompasses professional services and requirements, caskets, shipping containers, transportation, and hygienic practices. This part I of the specification is applicable to regular and port of entry requirements (Certain modifications have been made throughout to accommodate its inclusion in this instruction).

PART I

2. CLASSIFICATION

2.1 Remains, autopsied (partial or complete) or unautopsied, are defined as one of the following types.

2.1.1 Nonviewable: Any remains where there exists extreme mutilation, advanced stages of decomposition, severe burn wounds or charring, and restoration of viewable exposed tissue surfaces to the known ante mortem appearance of the deceased by restorative art is not possible.

2.1.2 Viewable: Any remains (a) undamaged by trauma or disease or (b) damaged by trauma or disease but viewable tissue surfaces are restored to the known ante mortem appearance of the deceased by restorative art work.

2.1.3 Casket: The standard and oversize 18 gauge metal sealer, cut top casket will be used for viewable and nonviewable adult remains.

3. APPLICABLE DOCUMENTS

3.1 There are no applicable documents to this part of this specification.

4. SERVICES

4.1 General: The contractor will be responsible for providing professional services of the highest quality to assure viewing of the remains under optimal conditions. The contractor will practice hygienic measures that will assure complete and satisfactory disinfection and sanitation of the funeral establishment.

#### 4.2 Processing or Reprocessing Remains

4.2.1 Processing of Remains: The complete preservation (embalming) and disinfection, application of restorative art techniques and cosmetics, dressing or wrapping, casketing, and transportation of remains as directed by the contracting officer or designee.

4.2.2 Reprocessing of Remains: The inspection and correction of all discrepancies noted in preservation (embalming). Application of restorative art techniques and cosmetics, dressing or wrapping, casketing, and transportation of remains as directed by the contracting officer or designee.

4.2.3 Unidentified Remains: If identification of remains is not officially established, the remains will be placed under refrigeration at 38-40 (F) (3.3 - 4.4C). If mechanical refrigeration is not available within a reasonable distance, ice chests or ice packs will be used in lieu of the mechanical refrigeration. Processing (embalming) will not be accomplished until remains are released by a responsible official as identified.

4.2.4 Restorative Art: Major restorative art is an integral part of the processing and reprocessing of remains. It will include, but not be limited to, rebuilding a large wound; rebuilding of facial features such as ear, nose, eye, mouth, chin, etc.; removal of damaged tissue followed by restoration; restoration of scalp hair; and the application of cosmetics to render restored surfaces nondetectable. Restorative art will be accomplished per the highest professional standards.

4.2.5 Chemical Preservative Preparation: Arterial, cavity, and other embalming chemicals used in the treatment of all remains, under this contract, will effect the maximum preservation and disinfection of all body tissue including those associated with body cavities (organs).

4.2.6 The contractor will provide high quality service and a sufficient number of licensed embalmers to process (embalm) or reprocess any remains under this contract on a timely basis. Interns (apprentices) may be used to assist the licensed embalmer per applicable State regulations. All supplies and technical procedures will conform to standards and professional techniques acceptable to the funeral service industry. Embalmers will use any and all optional techniques available to assure complete and adequate treatment of remains.

#### 5. TREATMENT OF REMAINS

5.1 General: Frequently, final disposition of processed or reprocessed remains may not be effected for a period of 10 days or more;

may be transported over long distances; or be subjected to hot, humid conditions. At all times the remains must be free of putrefaction and infectious agents. This requires the thorough disinfection and uniform preservation of all body tissues. Employment of continuous injection and intermittent drainage enhances chemical distribution and penetration. Use of humectants (moisture retention chemicals) in the arterial injection solution will help to achieve greater tissue penetration, and to restore normal body moisture content.

5.1.1 Pre-embalming Procedures: The following basic steps will be accomplished in the course of processing or reprocessing of all viewable remains, and to the extent possible, nonviewable remains.

5.1.2 When possible, remains will be bathed, male facial and scalp hair washed and groomed to conform to military standards (suitable hair preparations will be accomplished on females). Fingernails will be cleaned and trimmed. The mouth will be securely closed to form a natural expression and proper attention given to the eyes to prevent wrinkling of the eyelids and a sunken appearance of the eyes. Cosmetics will be applied only in the amount necessary to produce natural color and texture.

5.1.3 All lacerations, abrasions, incisions, excisions, and burn wounds will be sutured or sealed to prevent leakage. Swollen or distorted features will be reduced to the normal contours enjoyed during life. Postmortem stains will be chemically bleached by applying packs and needle injection. On viewable areas, further treatment will consist of the use of masking cosmetics to render stains nondetectable.

5.1.4 All body orifices will be treated with a disinfectant, non-astringent chemical (generic categories such as Phenylphenols and Iodophors) and then packed with cotton. Bedsores, ulcerated, burned, and necrotic tissue will be treated either by hypodermic injection, or pack application of deodorizing and preserving chemical.

5.1.5 Maggots and other insect larvae will be destroyed and their breeding sites in or on the remains thoroughly treated with an insecticide chemical.

5.1.6 The contractor's performance will be such that all remains are effectively disinfected, uniformly preserved, and all offensive odors eliminated before the remains are casketed.

## 6. PREPARATION OF REMAINS

6.1 General: The military services require that all remains be processed or reprocessed in a manner reflecting the highest stand-

ards of the funeral service profession. Each remains, viewable and nonviewable, requires variation in the embalming treatment to accomplish the optimum results. A recommended procedure to achieve these goals is the injection of the solution at a moderate rate. The addition of a humectant to the solutions is also helpful in reducing over-dehydration effects.

6.1.1 Processing Nonviewable Remains: In all instances, multi-site injection and drainage technique will be attempted. When arterial injection is possible, each gallon (3.8 L) of arterial fluid will have a minimum concentration of 5% by volume aldehyde or aldehyde derivative preservative agent(s). The total volume of arterial solution injected will not be less than one gallon (3.8 L) per 50 pounds (22.50 kg) of body weight. All body areas will be further treated by means of a trocar using undiluted cavity chemicals having a 30 index (%) or greater. In addition, packs, special gel, and dry sanitizers will be used, as required, to assure preservation, prevent leakage, and eliminate all offensive odor. Cranial, thoracic, and abdominal cavities, when present, will be relieved of gases and distention. The cavities will then be treated by injecting a minimum of 32 ounces (0.95 L) of a concentrated cavity chemical, having a 30-index (%) or greater. When arterial injection or cavity treatment is impossible, all articulated and disarticulated anatomical portions will be thoroughly disinfected and preserved via accessory chemical embalming techniques. Noninjectable intact remains or disarticulated anatomical portions will be immersed or hypo injected with trocar or syringe and needle, using full strength cavity chemicals 30-index (%) or greater. Surface application of liquid, gel, or dry sanitizers and preservatives is also required to supplement primary needle and hypo injection techniques.

6.1.2 Processing Viewable Remains: A thorough pre-embalming analysis will be made to determine the best embalming techniques to be used to obtain optimum results. The technique of arterial injection and venous drainage is of utmost importance as well as the need for adding humectants (moisture retention chemicals) to the arterial solution injected. Whenever possible, a six point arterial injection with multi-site drainage will be accomplished. The arterial chemical injection solution will contain a 2 to 3% concentration, by volume, of aldehyde or aldehyde derivative preservative agent(s), with equal parts of a humectant chemical also being added to the injection solution. The thoracic, abdominal, and pelvic cavities will be thoroughly aspirated and injected with full strength cavity chemicals having a 30-index (%) or greater, using a minimum of 16 ounces (0.47 L) for each cavity. In addition, needle injections, packs, or other special treatment will be accomplished, as required, to assure the preservation and disinfection of all body tissues including those associated with body cavities (organs). A lanolin-base (or comparable) massage cream will be applied on the face and hands.

- 6.1.3 Autopsied Remains: If a partial or complete autopsy has been performed, a six point injection with multi-site drainage will be accomplished, using arterial chemical injection solutions as specified for processing viewable remains. Thoracic and abdominal walls will be hypo-injected using the same strength solution as injected arterially. On thoracic or abdominal autopsies, the viscera will be removed and immersed in concentrated cavity chemical having a 30-index (%) or greater. When a cranial autopsy has been performed, the calvarium will be replaced and securely stabilized. The scalp will be replaced over the calvarium and neatly sutured to avoid an unnatural appearance and the hair will be washed. The inner surfaces of the body cavities will be given a liberal application of gel preservative, the organs replaced within the cavities in normal anatomical location and liberally covered with hardening compound.
- 6.1.4 Treatment of Scalp (Viewable Remains): When the scalp has been shaved because of medical treatment or surgery, processing or reprocessing will be accomplished as specified for viewable remains, after which the head will then be wrapped with gauze or equivalent in a neat and professional manner.
- 6.1.5 Mutilated Hands (Viewable Remains): When the hands are mutilated to the point that restoration is not possible, the hands will be treated in a manner which renders all tissue firm, dry, and thoroughly preserved. The hands will then be covered by either wrapping with gauze or equivalent in a neat and professional manner; or by placing surgical gloves on the hands followed by white (military) gloves.
- 6.1.6 Dressing Remains, Including Intact Nonviewable: Remains will be dressed in the clothing provided by the contracting officer. Nonviewable remains that cannot be dressed will be wrapped in the rubber or polyethylene sheeting and blanket furnished by the contracting officer. Wrapping will be accomplished as follows: A blanket will be spread on the dressing table with opposing corners at the head and foot ends of the table. The blanket is then covered with a white cotton sheet followed by a sheet of polyethylene. Two strips of cotton are laid down the center of the plastic sheet and liberally sprinkled with hardening compound. The remains are then laid on the cotton strips, coated with hardening compound, and covered with additional cotton strips. The polyethylene sheet is then wrapped around the remains. The white cotton sheet is then wrapped around the plastic sheathed remains followed by the blanket which will have as few creases as possible, and be secured with large safety pins placed no more than eight inches (20.0 cm) apart.
- 6.1.7 Embalmer Evaluation: The embalmer (contractor's agent) processing or reprocessing the remains will critically evaluate



the completed treatment to ensure that any remains cared for under this contract are effectively disinfected, uniformly preserved, and will arrive at destination in a satisfactory condition. The contracting officer or designee will authorize delivery or shipment of remains when that officer is assured that the services and supplies furnished by the contractor meet this specification. The contractor will state on a certificate (Preparation Room History), furnished by the contracting officer, that the services and supplies meet this specification in its entirety.

6.1.8 Placement in Casket: Remains will be placed in the casket in a manner that will create an appearance of rest and composure, and to ensure maintenance of position during transit. When remains are to be shipped, pads will be placed around them to prevent shifting. The pillow will be turned over and a clean piece of cloth placed over the face. The casket will be of sufficient size to prevent the appearance of crowding and cramping the remains.

6.1.9 Quality Assurance Evaluation: Failure to pass inspector's evaluation after placement of remains in a casket and before delivery will require contractor to remove remains from the casket and perform one or more of the following services as directed by the contracting officer or designee: (a) additional disinfective or preservative treatment; (b) re-dressing; (c) change or add decorations or insignia; or (d) place remains in a new casket. When services under this paragraph are performed, services as set forth in clauses 6.1.6, 6.1.8, and 6.1.10 of this part will again be performed by the contractor.

6.1.10 Encasing Casket: The casket will be carefully and professionally placed in the protective outer container, as directed by the contracting officer. All shipping documents will be affixed or enclosed.

6.1.11 Loading Remains: The remains will be carefully and professionally placed in the type of vehicle designated by the contracting officer for the delivery of remains.

## 7. TRANSPORTATION OF REMAINS

7.1 Removal of Remains: Transporting remains in a suitable funeral coach, ambulance, or service car to place where processing or reprocessing is performed. This transportation will include calling at the place where death occurs or remains are located when such place is on the activity(ies) or at any other location designated by the contracting officer or designee.

7.2 Delivery of Remains, Including Escort: In a contractor's funeral coach to a place of religious service and then to a common carrier terminal, another funeral home, or to a Government or non-

Government cemetery. Contractor's funeral coach will arrive at each location at the time specified by the contracting officer.

7.2.1 Remains being shipped by common carrier will be delivered to airport or rail terminal not later than 2 hours before scheduled departure of aircraft or train.

7.2.2 Personnel used in transportation of the remains or of the escort, off the reservation, will be dressed in a seasonal suit with shirt and tie. Other vehicle operators may wear clean cotton twill, matching shirt, and trousers in dark or neutral colors.

## 8. CREMATION

8.1 Cremation: This clause provides for services, supplies, and transportation for a local cremation when called for by the contracting officer. Remains will be treated and dressed as prescribed in this specification. The casket will be of seasoned wood, standard to the local industry where manufactured. The covering will be grey cotton, broadcloth, moleskin, doeskin, or other suitable finish and the hardware common to the industry. Transportation of remains (including escort and escort's return) to the crematory serving the local area and cremated remains to a Government facility will be provided. The contractor will provide a rectangular or vase type spun bronze urn with carrying or shipping container. The urn will be engraved with the name, grade or rate, date of birth, and date of death of the deceased. The contractor will place the cremated remains in the urn. (Bidders will submit with their bid a full description of the casket, urn, and container that the bidder proposes to furnish.) (Note: Cremation charges will be paid by the Government to the crematory or the contractor.)

## 9. HYGIENIC PRACTICES

9.1 Funeral Establishment or Port of Entry Mortuary: The contractor will employ protective, precautionary hygienic measures and techniques designed to accomplish concurrent and terminal disinfection and decontamination of the entire funeral service establishment or port of entry mortuary preparation room and shipping area environment. The application of appropriate in-use concentrations of chemical disinfectants (such generic categories as Phenylphenols or Iodophors) to body surfaces and orifices, instruments, preparation room, floor, walls, and equipment surfaces and general sanitation of public visitation areas (as applicable) will help prevent the transmission of actual and potential pathogens to personnel.

9.2 Contractor Personnel: Also recommended is the wearing of protective, surgical type oral-nasal mask designed to prevent the

inhalation of infectious particles originating from the surface, orifices, and cavities of human remains.

10. PORT OF ENTRY (POE) MORTUARY - ADDITIONAL REQUIREMENTS

10.1 Processed (Embalmed) Remains: The contractor (responsible licensed embalmer) will remove remains from the transfer case or casket and, with the contracting officer or designee, determine:

- a. Whether remains are viewable or nonviewable.
- b. Effectiveness of disinfection, uniformity of preservation, and any additional disinfective and preservative treatment and restorative art work and cosmetic work required.
- c. Size of casket to be used.

10.2 Unembalmed Remains: The contractor (responsible licensed embalmer) will remove the remains from the transfer case or casket and, with the contracting officer or designee, determine:

- a. Whether the remains are viewable or nonviewable.
- b. The treatment to effectively disinfect and uniformly preserve the remains and also eliminate all offensive odors emanating from the remains.
- c. Restorative art and cosmetic work required.
- d. Size of casket to be used.

10.3 Reprocessing Viewable Remains: Tissue areas requiring further or special attention will be treated to assure that the remains are effectively disinfected and uniformly preserved. The treatment will be accomplished by one or more of the following: trocar or hypodermic injection or external pack application using full strength cavity chemicals having a 30-index (%) or greater. Thoracic, abdominal, and pelvic cavities will be relieved of gases and distention and reinjected with a minimum of 32 ounces (0.95 L) of concentrated cavity chemicals having a 30-index (%) or greater.

10.4 Reprocessing Nonviewable Remains: Those tissues requiring further or special attention will be treated to assure the remains are effectively disinfected and uniformly preserved. This treatment will be accomplished by means of one or more of the following: Trocar or hypodermic injection or external pack application using full strength cavity chemicals having a 30-index (%) or greater. Thoracic and abdominal cavities, when present, will be



relieved of gases and distention and reinjected with a minimum of 32 ounces (0.95 L) of concentrated cavity chemicals having a 30-index (%) or greater.

10.5 Processing Unembalmed Adult Remains: The contractor will perform those requirements enumerated in Clause 6, "Preparation of Remains", of this specification.

10.6 Treatment of Infant and Child Remains - The following is applicable for Neonatal, Infant, and Child Remains (birth through 60 months):

10.6.1 Viewable and Injectable Remains: Arterial injection will be accomplished by injecting intact arterial pathways, the abdominal aorta, or left ventricle, as applicable and agreed to by the contracting officer or designee. Drainage will be taken from appropriate venous sites. The arterial injection solution will have a concentration of 2% to 3% (as required) by volume aldehyde or aldehyde derivative preservative agent(s). The cranial, thoracic, abdominal, and pelvic cavities will be thoroughly aspirated. The cavities will then be injected by means of a trocar with sufficient amount of cavity fluid (having a 30-index (%) or greater) to thoroughly saturate the organs and contents.

10.6.2 Nonviewable and Non-Injectable Remains: Such remains will be disinfected and preserved by means of accessory embalming techniques. Superficial and deep tissue will be injected by infant trocar or syringe and needle. The arterial injection solution will have a minimum concentration of 5% by volume aldehyde or aldehyde derivative preservative agent(s). The supplemental use of liquid (packs), gel, or dry sanitizers for the confirmed disinfection and preservation of superficial tissue will also be accomplished. The cranial, thoracic, abdominal, and pelvic cavities will be thoroughly aspirated. The cavities will then be injected by means of trocar with sufficient amount of cavity fluid (having a 30-index (%) or greater) to thoroughly saturate the organs and contents.

10.6.3 Autopsied Remains: If a partial or complete autopsy has been performed, a 6 point arterial injection with multi-site drainage will be accomplished. The arterial chemical injection concentration solution requirements indicated in clause 10.6.1, as applicable, will also apply. Following the arterial injection, the thoracic and abdominal walls will be hypo-injected by means of a trocar or syringe with an arterial solution of the same strength as injected arterially. Treatment for organs or portions of organs which have become separated during autopsy investigation will be removed from the cavities and immersed in concentrated cavity chemical having a 30-index (%) or greater. Inner surfaces of body cavities will be treated with a liberal application of a gel preserv-

ative, then the organs or portions thereof returned to the cavities in their normal anatomical location and covered with hardening compound. Calvarium will be replaced, scalp sutured, and hair treated as indicated for adult autopsied remains.

10.6.4 Treatment of Scalp (Viewable): When scalp has been shaved, procedures indicated in clause 6.1.4 apply.

10.6.5 Mutilated Hands (Viewable): Procedures indicated in clause 6.1.5 apply.

10.6.6 Dressing Remains: Procedures indicated in clause 6.1.6 apply.

10.6.7 Embalmer Evaluation: Procedures indicated in clause 6.1.7 apply.

10.6.8 Placement in Casket: Procedures indicated in clause 6.1.8 apply.

10.6.9 Quality Assurance: Procedures indicated in clause 6.1.9 apply.

10.6.10 Encasing Casket: Procedures indicated in clause 6.1.10 apply.

10.6.11 Loading Remains: Procedures indicated in clause 6.1.11 apply.

## 11. TRANSPORTATION OF REMAINS

11.1 Removal of Remains: Transporting remains in a suitable covered vehicle (funeral coach, ambulance, covered truck) that prevents exposure of the shipping container to public view, from a place designated by the contracting officer or designee to the place where processing or reprocessing is to be performed. More than one remains may be moved in said vehicle at a time, but stacking of one container on top of another is prohibited.

11.1.2 Delivery of Remains: Transporting remains and escort in a suitable covered vehicle from place of processing or reprocessing to any place designated by the contracting officer or designee, including the flight line at the area port of embarkation APOE. Stacking of one casket or outer case on top of another is prohibited.

a. Remains moving by common carrier will be delivered to the airport or rail terminal not later than 2 hours before scheduled departure time.

b. Remains to be moved by air from APOE will be delivered to flight line at the time designated by the contracting officer or designee.

c. A funeral coach will be required when remains are delivered direct to: (1) a national cemetery; (2) a funeral home or residence; or (3) a crematory. The funeral coach will be clean, highly polished, and in good mechanical condition.

d. Remains moved to a national cemetery, crematory, funeral home, or residence will arrive at destination at the time specified by the contracting officer or designee.

e. Personnel: Dress code indicated in clause 7.2.2 will apply.

f. Transfer Case: The reusable metal transfer case will be returned to a location as directed by the contracting officer or designee. The contractor will clean and sanitize the transfer case each time after removing remains therefrom.

12. Cremation: Procedures contained in clause 8.1 will apply.

13. Hygienic Practices: Procedures contained in clauses 9.1 and 9.2 apply.

APPENDIX J (Continued)

ARMED SERVICES SPECIFICATION  
CASKETS AND SHIPPING CONTAINERS  
(REGULAR AND PORT OF ENTRY REQUIREMENTS)

1. SCOPE

1.1 This specification establishes minimum standards for adult caskets (part II), adult shipping containers (part III), and infant and child caskets and cases (part IV).

PART II

CASKETS

2. CLASSIFICATION

2.1 Caskets covered by this specification will be the following type and sizes.

2.1.1 Standard Size: Eighteen gauge metal sealer, cut top. Inside dimensions will not be less than 78" (1.98 m) in length, measured between the inner surfaces of the end panels, and 23" (58.4 cm) in width, measured between the inner surfaces of the side panels.

2.1.2 Oversize: Eighteen gauge metal sealer, cut top. Inside dimensions will not be less than 81" (2.06 m) in length, measured between the inner surfaces of the end panels, and 25" (63.5 cm) in width, measured between the inner surfaces of the side panels.

3. APPLICABLE DOCUMENTS

3.1 The following documents, of the issue in effect on date of invitation for bids or requests for proposals, form a part of this specification to the extent specified herein:

Specifications

Federal

TT-C-490 - Cleaning Methods and Pretreatment Methods of Ferrous Surfaces for Organic Coatings

Standards

Military

MIL-STD-105 - Sampling procedures and Tables for Inspection by Attributes

(Copies of specifications and standards required by bidder in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

#### 4. REQUIREMENTS

4.1 Sample Casket: When specified, a sample completed casket or sample casket without upholstery will be made available to the contracting officer or authorized designee for quality assurance inspection per clause 6 of this part. The approval of the sample is acceptance of the casket but does not relieve the contractor of responsibility for compliance with all applicable provisions of this specification. The pre-furnished sample(s) will be manufactured in the same facilities to be used for the manufacture of caskets to be furnished under contract.

4.2 Materials: Materials will, as a minimum, conform to the applicable specifications and requirements specified hereinafter. Unless otherwise specified herein, tolerance for materials will, as a minimum, conform to this specification.

4.2.1 Steel: Steel sheet will be common or standard to that used within the metal casket industry.

4.2.2 Fabric (Lining): The construction of this cloth, as a minimum, will be: Warp 92 ends - 100 denier dull acetate yarn; filling 52 picks - 150 denier dull acetate yarn. The acetate taffeta fabric's finish will be flat or embossed. The color will be white (ivory).

4.2.3 Nonwoven Fabric Material Tissue: The nonwoven material for backing the fabric of the lining assemblies will be scrim laminate consisting of 3 x 2 1/2 nylon scrim with 2 plys of tissue adhesively bonded to each side of scrim. White in color.

4.2.4 Pillow and Body Pocket: Will be a minimum of 40% cotton and 60% linters or synthetic equivalent.

4.2.5 Welding: All component parts to be welded will be properly aligned into position prior to welding. Resistance, arc, or gas welds will be sound and free from pits, holes, or fissures. Welding will be accomplished without burning through the welded metals. After any flash welding, outside exposed flash will be removed entirely and no trace of the joint will be visible after finishing. All arc or gas welds will have sufficient penetration to form a joint of strength equal to that of the parent metal. Exposed welds will be finished flush to the original surface and will be undetectable after finishing. Repair of welds will be accepted, provided such repaired welds meet the requirements of this specification.

#### 4.2.6 Upholstering

4.2.6.1 Lining Assemblies: The lining assemblies for the interior of the head panel lid, sides, and ends of casket, overlay, mattress



spread, pillowcase, two piece top (lid) supports (one piece top (lid) supports will be finished to compliment the casket), and the sides of the casket body will be as specified in clause 4.2.3. The head top will be lined with interior styling. The foot top will be lined with fabric and backing as specified in clauses 4.2.2 and 4.2.3 or may be upholstered by applying a rigid one piece insert, simulating fabric finish. The assemblies for the lid or head panel, as applicable, top of the pillowcase, outside exposed body lining, and top side of overthrow will be "Wave Crushed", tufted or shirred either by hand or machine. The interior assemblies for the sides and ends of casket will be tailored or shirred by hand or machine. Before lining the casket, the inside of the shell will be cleaned of all foreign material.

4.2.6.2 Pillow: The pillow will be made of nonwoven material specified in clause 4.2.3 and filled with a minimum of 2 1/4 pounds (1.3 kg) of the specified filling material. The pillow will then be encased in an outer fabric cover as specified in clause 4.2.2. The pillow will be sized to properly fit the casket.

4.2.6.3 Mattress: The mattress will be made of fabric specified in clause 4.2.3, or polyethylene (.004) film, and filled with cotton as specified in clause 4.2.4, or synthetic filling in one piece such as polyester or fiberglass, excluding all foam type and excelsior materials. Quantity of mattress fill, if cotton or similar, will be 16 pounds (7.2 kg), plus or minus one pound (0.45 kg). Should the casket be equipped with an adjustable inner spring, the mattress fill will render a minimum uniform thickness of two inches (5.0 cm). In each instance, the mattress will be sized to properly fit the casket.

4.2.6.4 Side Panels: Side panels of the casket body will have padding in the skirting or apron area.

4.2.7 Finish: The color of the casket's painted finish will be within the range of silvertone to grey. The painted finish may be achieved through one of two methods.

4.2.7.1 Synthetic Enamel, Baked: All surfaces of metal components, including outside of bottom and inside of shell, will be thoroughly cleaned and given a phosphate coating conforming to TT-C-490. A primer will be applied to all exposed surfaces and will be sanded to a smooth finish. A primer will be applied to the outside of bottom and inside of shell. All exterior metal surfaces exposed to view, including surfaces that are exposed when casket is opened (not applicable to bottom), will be coated with the appropriate color synthetic gloss enamel, in a quantity not less than 2.0 mils dry film thickness. The exposed heads of screws

or bolts used for assembling the casket will be appropriately finished (plated or painted) to correspond or compliment the parent metal finish. The finish coat will level out to produce a smooth and uniform flow without orange peel, runs, wrinkles, drops, streaks, or areas of thin film or no film.

4.2.7.2 Nitrocellulose Lacquer (Air Dry or Flash Dry): All surfaces of metal components will be thoroughly cleaned and given a phosphate coating conforming to TT-C-490. A primer will be applied to all exposed surfaces and edges and to the outside of bottom and inside of shell. The primer will be scuff sanded in all exposed view areas. Forced drying may be used, if desired. All exterior metal surfaces exposed to view, including surfaces that are exposed when casket is opened (not applicable to bottom), will be given an adequate coating of the appropriate color lacquer. All surfaces will then be coated with a clear lacquer to achieve at least the required 2.0 mils dry film thickness. The exposed heads of screws used for assembling the casket will be appropriately finished (plated or painted) to correspond or compliment the parent metal finish. The finish coat will level out to produce a smooth and uniform flow without orange peel, runs, wrinkles, drops, streaks, or areas of thin film or no film. The casket will be well finished, smooth, clear, and free from defects which may affect the appearance or serviceability.

4.2.8 Casket Protective Cover (Paper or Plastic): A casket protective cover, common to the casket industry, will be placed over each casket.

## 5. CONSTRUCTION DESIGN

5.1 Sealer Casket: The casket will be of steel 18 gauge, U.S. Standard, square or round ends with top and bottom molding with a painted finish as specified in clause 4.2.7. The casket may have appropriate shading effect. The handle assembly will be a continuous fixed bar or swing out type handle. Applied lugs and corners will be plated in finish. The casket will be furnished in the sizes specified in clause 2. The casket will be constructed to yield an airtight seal when closed, which will prevent the escape of odors and leakage. Airtightness compliance will be determined per clause 6.3.1.

### 5.1.1 CONSTRUCTION DETAILS

5.1.1.1 Body: The casket will be fabricated from steel 18 gauge in thickness. The top flange will be of the same material and thickness as the body and will be reinforced to provide sufficient bearing to support the lid assemblies. The full length of all miters will be welded.

5.1.1.2 Bottom Panel: The bottom panel will be constructed from one piece of metal 18 gauge or better with reinforcing ridges. The construction details of the bottom follow. The bottom panel will withstand, as a minimum, 350 pounds (157.50 kg) load with deformation not to exceed one quarter inch (.51 cm) when tested per clause 6.3.2.

5.1.1.2.1 The one piece bottom will be constructed of steel 18 gauge or better thickness with adequate reinforcing ridges extending lengthwise or crosswise to the bottom. The bottom panel will be appropriately reinforced to meet weight and stress requirements. The entire length and width of the bottom seams will be (continuous) welded as specified in clause 4.2.5.

5.1.1.3 Lid: The casket will consist of a two pieced (stamped from one piece of metal) cut top lid with traditional oval panel and top frame. The lid will be fabricated of steel 18 gauge in thickness. The bridge between the lids, to accommodate the bridge or cross gasket, will be a full header.

5.1.1.4 Shell Hardware: Each lid will be hinged with two hinges each for proper support and to effect a positive seal. Lids will be provided with locking supports for retaining the lids in an open position. Each lid will have two sealer locks (opposing each hinge) lever-operated with nondetachable lever operating handle, or equipped with a crank-type positive locking system with two locking device engagements on each lid opposing the hinges.

5.1.1.5 Handle Assembly: Will be 3 x 1 or 4 x 1 continuous fixed bar or swing out handle assembly. The entire handle assembly, bars, lugs, and corners will be fabricated of metal or a combination of metals standard to the metal casket industry. The entire handle assembly will be fastened to the casket body in a manner that will ensure that the handle assembly will not rupture or show deformation when tested per clause 6.3.3. The finish applied to the handle assembly's lugs and corners will be plated in a manner common to the metal casket industry. The fixed bar or swing out handles will be painted or finished in a manner to compliment the casket.

5.1.1.6 Perimeter and Bridge or Cross Gasket System: The gasket will be fabricated from natural rubber, neophrene, ethylene vinyl acetate (EVA), closed cell polyvinyl chloride (PVC), or any equivalent of the aforementioned. Gasket corners will be mitered and molded and either vulcanized (rubber) or heat sealed (EVA, PVC). The gasket systems, with the lids in a closed locked position, will yield an airtight seal when tested per clause 6.3.1.

5.2 Workmanship: The casket will be produced by the best means employed by those skilled in the art of metal fabrication and upholstering. All parts will be accurately formed and properly assembled into the finished article and each casket will be of the quality and grade of product established by this specification.

## 6. QUALITY ASSURANCE PROVISIONS

6.1 Responsibility for Inspection: Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the contractor may use the contractor's or any other facilities suitable for the performance of the inspection requirements specified herein. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are called for to assure supplies and services conform to prescribed requirements.

6.2 Quality Conformance Inspection: Sampling for inspection and acceptance will be performed per the provisions set forth in MIL-STD-105, when called for.

6.2.1 Inspection of Materials and Components: Per clause 6.1, components and materials will be inspected and tested per all the requirements of this specification and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

6.2.2 End Item Inspection: The lot will be all caskets offered for inspection at one time. The sample unit for this inspection will be one complete casket.

6.2.2.1 Visual Examination: Examination of the caskets will be made per the classification of defects set forth in Table I.

6.2.2.2 Dimensional Examination: Inspection will be made of the finished caskets for dimensions specified. Any noncompliance with specified requirements will constitute a defect.

6.2.2.3 End Item Testing: Testing will be performed per clause 6.3.

## 6.3 Test Methods

6.3.1 Airtightness: The Halogen leak test will be used by the Government or the supplier. Conduct test as follows: A generous portion of freon refrigerant gas will be released into the casket and the casket lids closed and locked for 5 minutes. Then a Turner

Halide Gas Leak Detector Model LP 777 or equivalent will be applied to all joints, bottom, gasket and sealing system, and handle assembly for the purpose of detecting leaks on the casket. Results will be used to determine compliance with clauses 5.1 and 5.1.1.6.

6.3.2 Bottom Deformation Test: The casket will be loaded with a uniformly distributed weight of 350 pounds (157.50 kg), and the lids closed and locked. The casket will then be attached to a rectangular suspension frame by metal straps at 6 evenly spaced points along each side handle, as close to hardware attachment points as possible and will be arranged as to produce uniform weight distribution by means of adjusting wedges. The width of the strap around the handle will be 3 inches (7.5 cm). The suspension frame will be lifted until the bottom of the casket has cleared the floor by 4" (10.0 cm). Bottom deformation will be measured by placing a straight edge under the casket from the front side to the back side at the casket's midpoint. The extent of deformation will be the average of 2 measurement readings taken simultaneously at the edge of the front side and back side of the casket. The reading will be determined by measuring the distance from the bottom of the casket to the top of the straight edge. The casket will remain suspended for a period of 15 minutes and examined for compliance with clause 5.1.1.2.

6.3.3 Handle Bend Test, Static Loading: The test will be made per clause 6.3.2 except that the casket will be suspended at 2 points on each side. These points will be located midway between the lugs toward the ends of the casket. The same test will be performed on the end handles, that each end will be lifted separately using 2 points of suspension on the end handle. Handles will then be examined for compliance with clause 5.1.1.5.

## 7. CASKET CERTIFICATION

7.1 The contractor will be required to provide a statement that the casket to be furnished for use under the terms of the contract conforms in all details to the minimum specifications contained therein. Extra copies of the specification may be obtained from the contracting officer.



## APPENDIX J (Continued)

Table I - CLASSIFICATION OF CASKET DEFECTS

Examine	Defect	Classification	
		Major	Minor
Primer			
Outside of bottom and inside of shell.	No primer on outside of bottom or inside of shell.....	X	
Finish			
All exterior metal surfaces exposed to view, including surfaces that are exposed when casket is opened (not applicable to bottom).	Not within specified range of color.....	X	
	Orange peel or texture.....	X	
	Area of no film.....	X	
	Gritty surface or over-spray that is rough to touch.....		X
	Wet or tacky surface.....	X	
	Any permanent stain or blemish...	X	
	Paint on gasket.....		X
	Finish dirty, e.g., oil, glue, or other nonpermanent stain.....		X
Construction and workmanship (metal, rubber, and vinyl component, general) (unless otherwise classified herein).			
	Any functioning assembly that is inoperative, e.g., lid locks will not operate as intended..	X	
	Any part loose, e.g., fixed bar is loosely fitted to lug or corner, but bar is adequately retained or swing out bar bent or fails to swing out smoothly		X
	Any functioning assembly that requires abnormal pressure to operate.....		X
Welding			
	Not welded where required or not specified type of welding.....	X	
	Weld burned through, not free from pits, holes, or fissures.....	X	
	Outside flash not stripped.....	X	
	Exposed welded joints not ground and sanded flush to original surface.....		X

## APPENDIX J (Continued)

Examine	Defect	Classification	
		Major	Minor
Metal fasteners (screws, bolts, nuts, etc.).	Any missing, stripped, not sealed, improper length, or otherwise damaged.....	X	
	Any fastener cocked.....	X	
	Not specified type fastener....	X	
Upholstery	Any component missing or stained	X	
	Any open seam, tear, or material defect.....	X	
	Waving or pleating crushed or matted down.....	X	
	Lining pulled away where it should be affixed.....	X	
Assembly	Lid not properly centered on body, i.e., no clearance between top molding and lid angle (check with lid secured in place).....	X	
	Evidence of no gasket compression when lids are securely fasten- ed to body.....	X	
	Any part perceptibly out of square or not symmetrical...	X	
	Casket rocks more than 1/2" (1.25 cm) when placed on a level surface (check with lid secured in place).....	X	

APPENDIX J (Continued)

PART III

OUTER SHIPPING CONTAINERS FOR CASKETS  
(Air Tray or Equivalent)

8.1 Outer shipping containers are authorized for shipment of standard and oversized caskets.

8.2 Outer shipping containers furnished by contractors will conform to the Performance Test Specification requirements of the air carriers and subsequent connecting carriers.

8.3 For overseas shipment, the contractor will provide an outer shipping container for caskets that meet the requirements of the air carriers and countries involved.

APPENDIX J (Continued)

ARMED SERVICES SPECIFICATION  
CARE OF REMAINS OF DECEASED PERSONNEL  
(PORT OF ENTRY REQUIREMENTS)

PART IV INFANT AND CHILD CASKETS AND SHIPPING CASES

1. CLASSIFICATION

1.1 Caskets and shipping cases covered by this specification will be of the following types and sizes.

1.1.1 Infant Caskets, Polystyrene: Sizes (outside length) not less than 23" (57.5 cm) nor more than 27" (67.5 cm).

1.1.2 Child Caskets, Wood, Cloth Covered: Sizes 2' 6" (75.0 cm), 3' (0.9 m), and 4' (1.2 m).

1.1.3 Shipping Cases: Suitable outer shipping case for casket sizes indicated in clauses 1.1.1 and 1.1.2.

2. APPLICABLE DOCUMENTS

2.1 There are no documents applicable to this part of this specification.

3. CONSTRUCTION AND DESIGN

3.1 Infant Casket: Casket will be fabricated from high density polystyrene or equivalent, having no welds, seams, or joints. The casket will be constructed to form a tight seal when the casket lid is closed. Casket exterior will be finished white in color. Pillow and mattress fill will be cellu down or equivalent. Interior lining will be backed with cotton or equivalent. Pillow and mattress outer covering and the casket interior lining will be finished (lined) in white crepe material. The casket will be furnished with a suitable outer shipping case.

3.2 Child Casket: Casket will be of a seasoned wood, standard to the casket industry. The casket's outer covering will be lambskin or equivalent, white in color. The hardware will be common to the casket industry. Casket interior lining will be backed with cotton or equivalent. The pillow and mattress fill will be of cellu down or equivalent. The pillow and mattress outer covering and casket interior lining will be finished in white crepe material. The casket will be furnished with a suitable outer shipping case.

4. DEFECTS

4.1 Infant and child caskets will be free of all defects (materials and workmanship) affecting their appearance and serviceability.

5. INTENDED USE

5.1 The standards covered by this specification are intended to be used in conjunction with Schedule of Contract for Care of Remains of Deceased Personnel, Port of Entry Requirements.